

KIC 008307075

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
008307075-01	OBS	No	367.088061	237.974973	1400.6	10.897	10.9	10.5	1.08	5795	4.62	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008307075-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

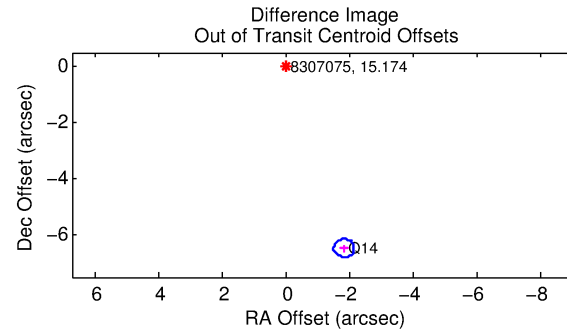
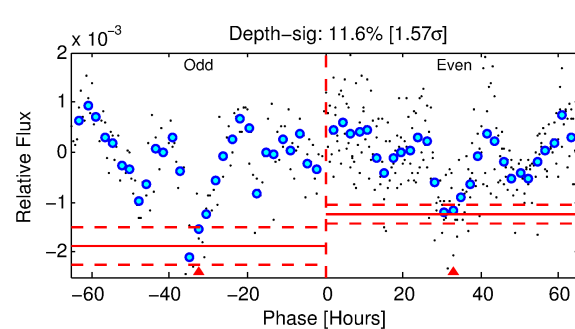
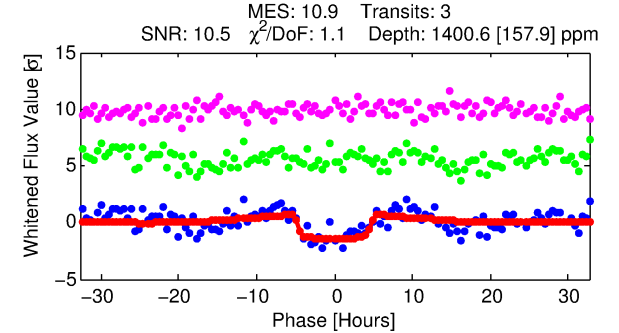
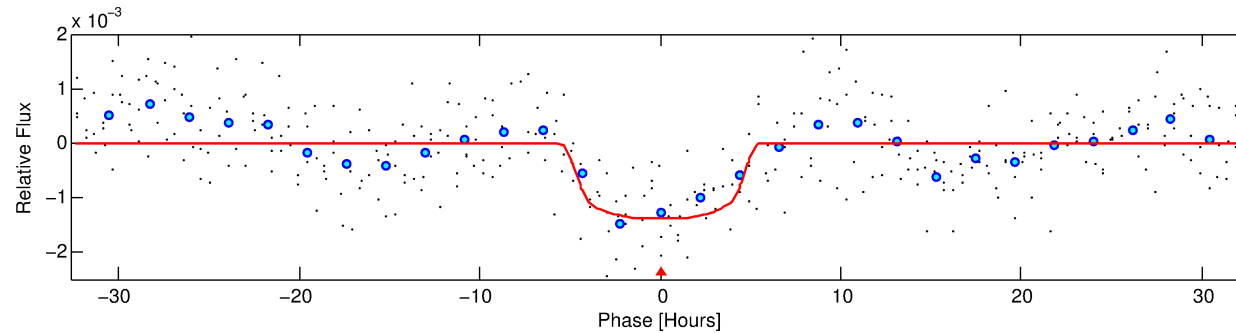
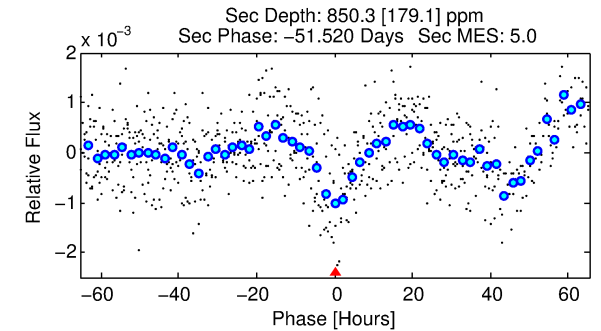
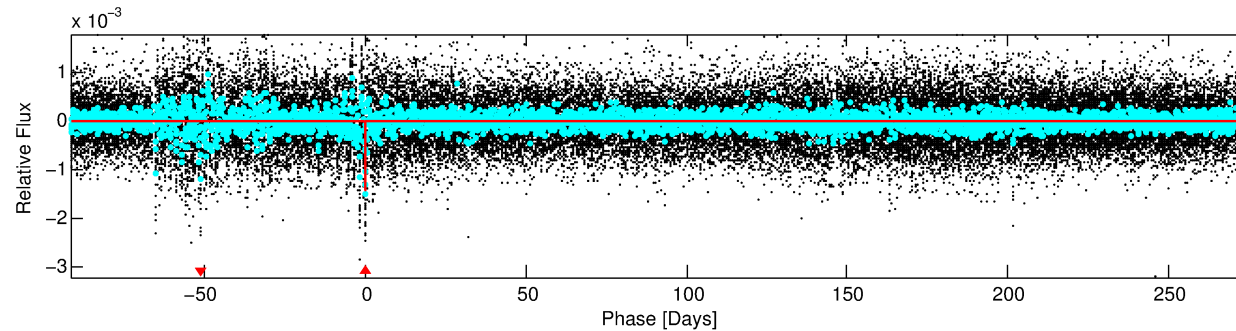
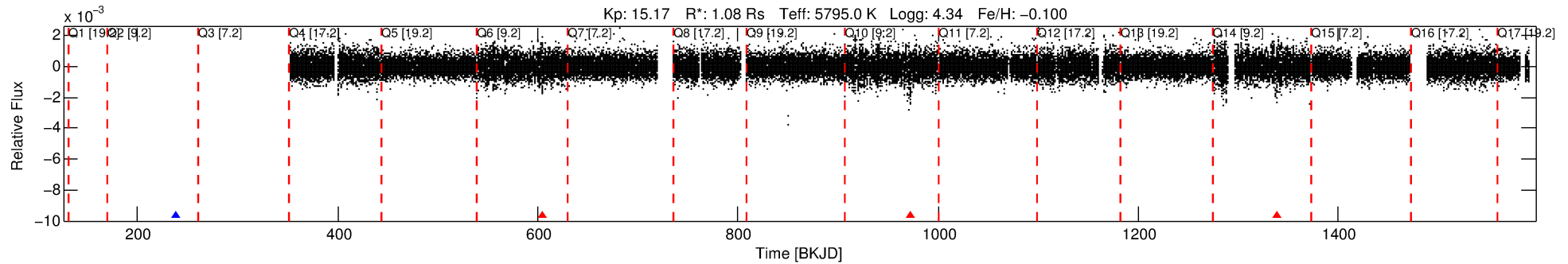
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008307075-01

No Significant Match Found

DV One-Page Summary

KIC: 8307075 Candidate: 1 of 1 Period: 367.088 d



DV Fit Results:

Period = 367.08806 [0.01028] d
Epoch = 237.9750 [0.0219] BKJD
Rp/R* = 0.0393 [0.0041]
a/R* = 151.34 [55.54]
b = 0.86 [0.12]
Seff = 1.22 [0.45]
Teq = 268 [25] K
Rp = 4.62 [1.42] Re
a = 0.9804 [0.2361] AU
Ag = 21104.08 [9610.61] [2.20σ]
Teffp = 4991 [405] K [11.65σ]

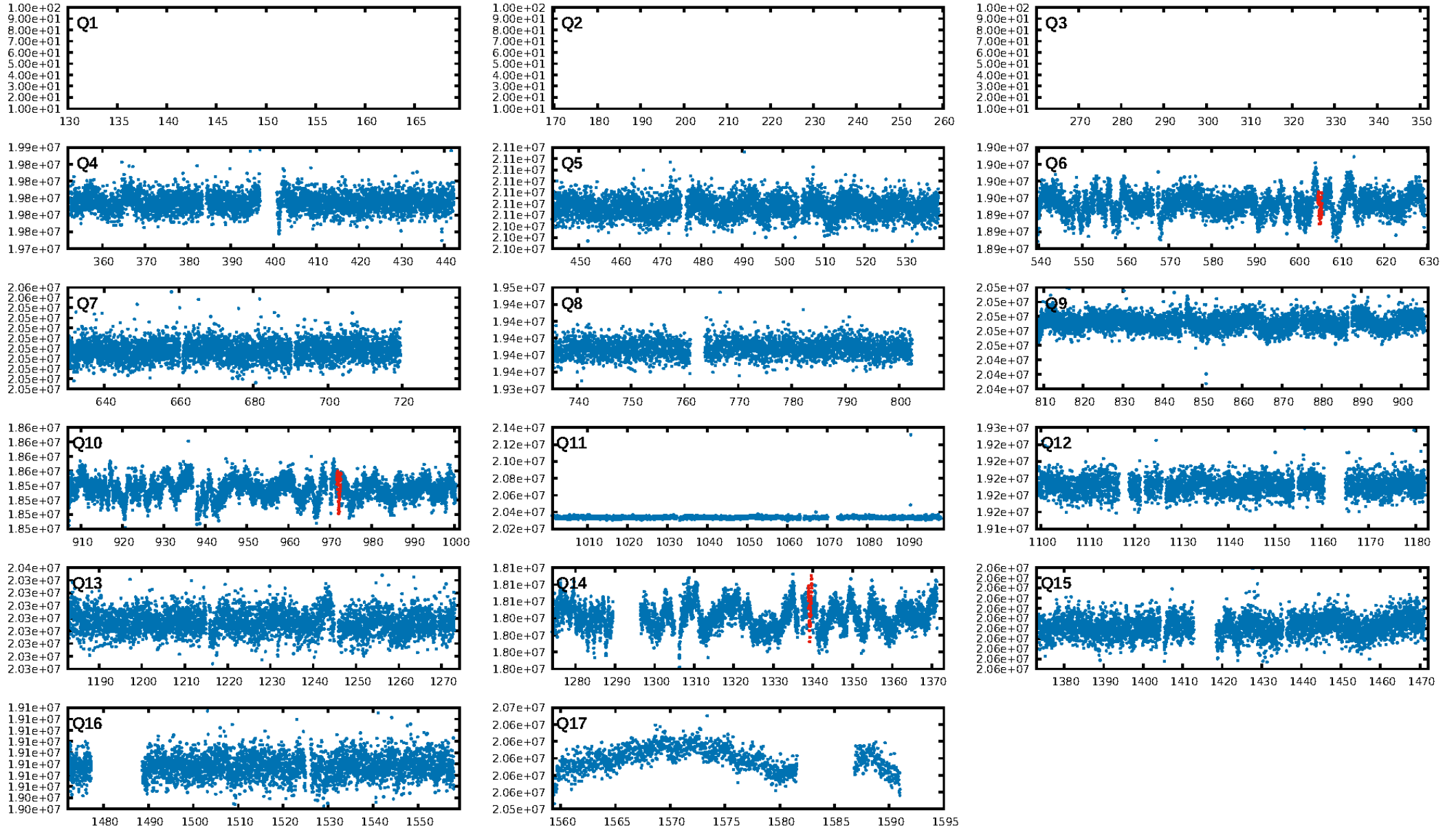
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 92.6%
Bootstrap-pfa: 8.22e-15
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 5.505
Centroid-sig: 0.0%
Centroid-so: 1.143 arcsec [1.87σ]
OotOffset-rm: 6.724 arcsec [62.55σ]
KicOffset-rm: 3.482 arcsec [32.30σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

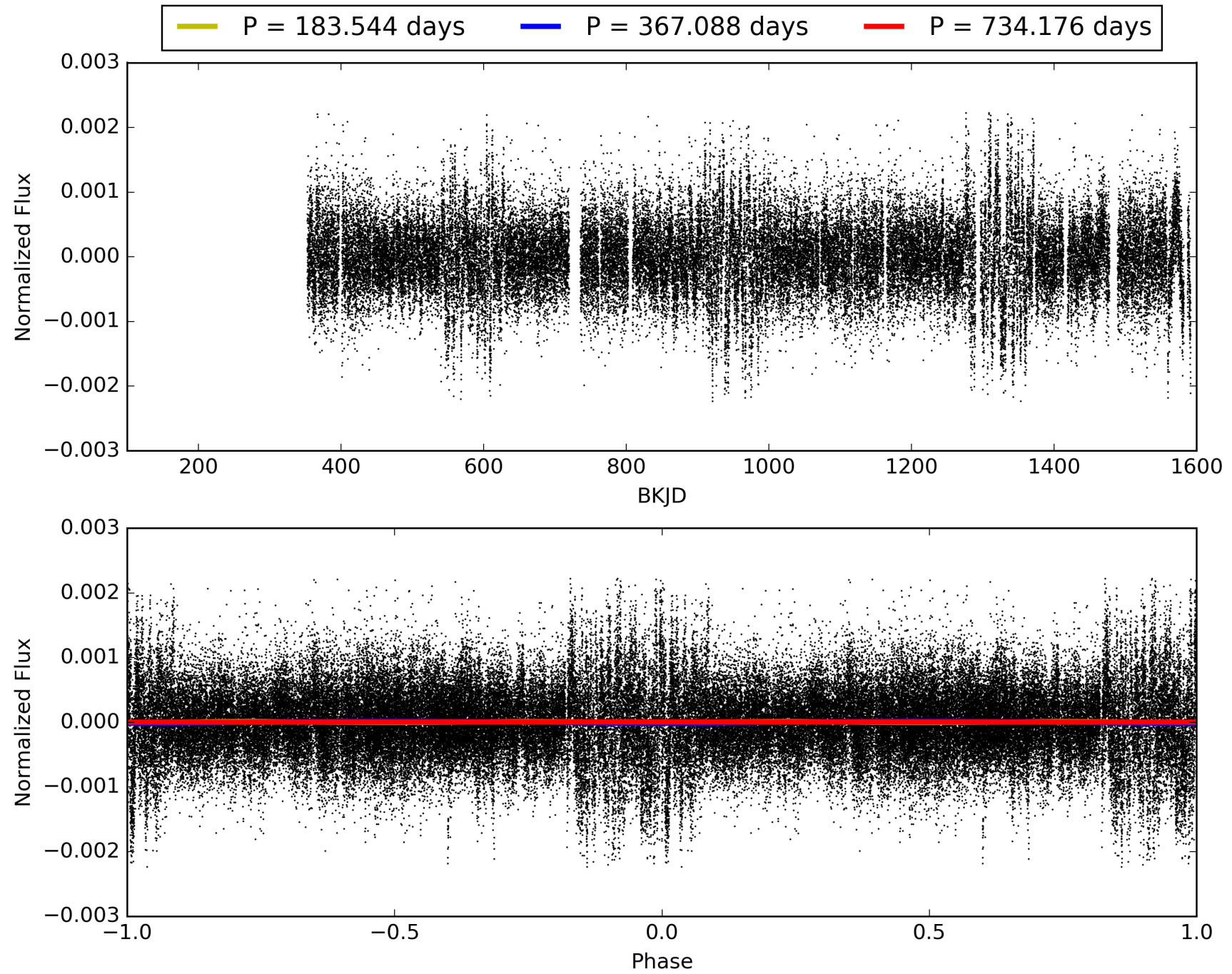
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:00:36 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008307075-01, PDC Light Curves

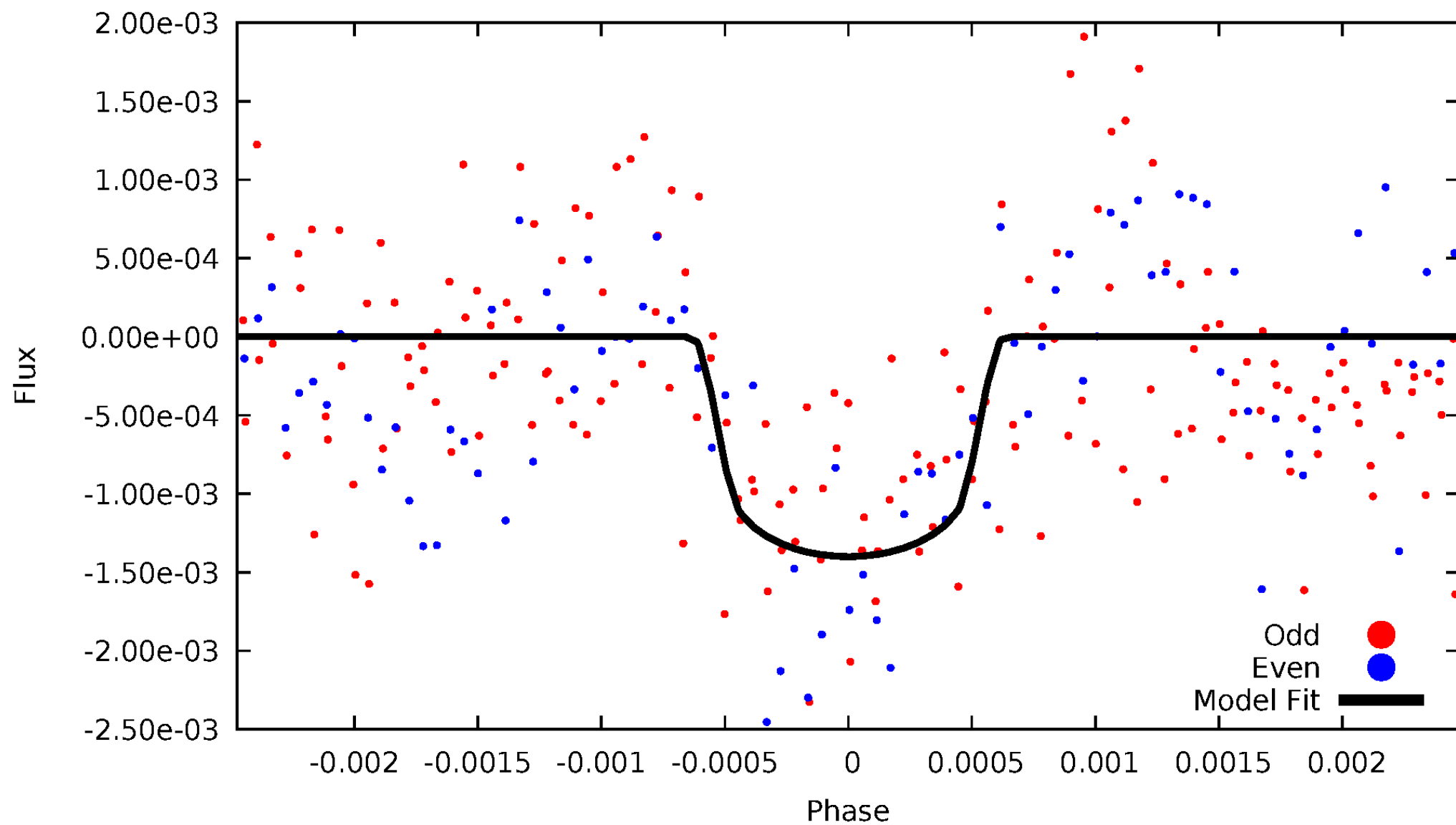


TCE 008307075-01



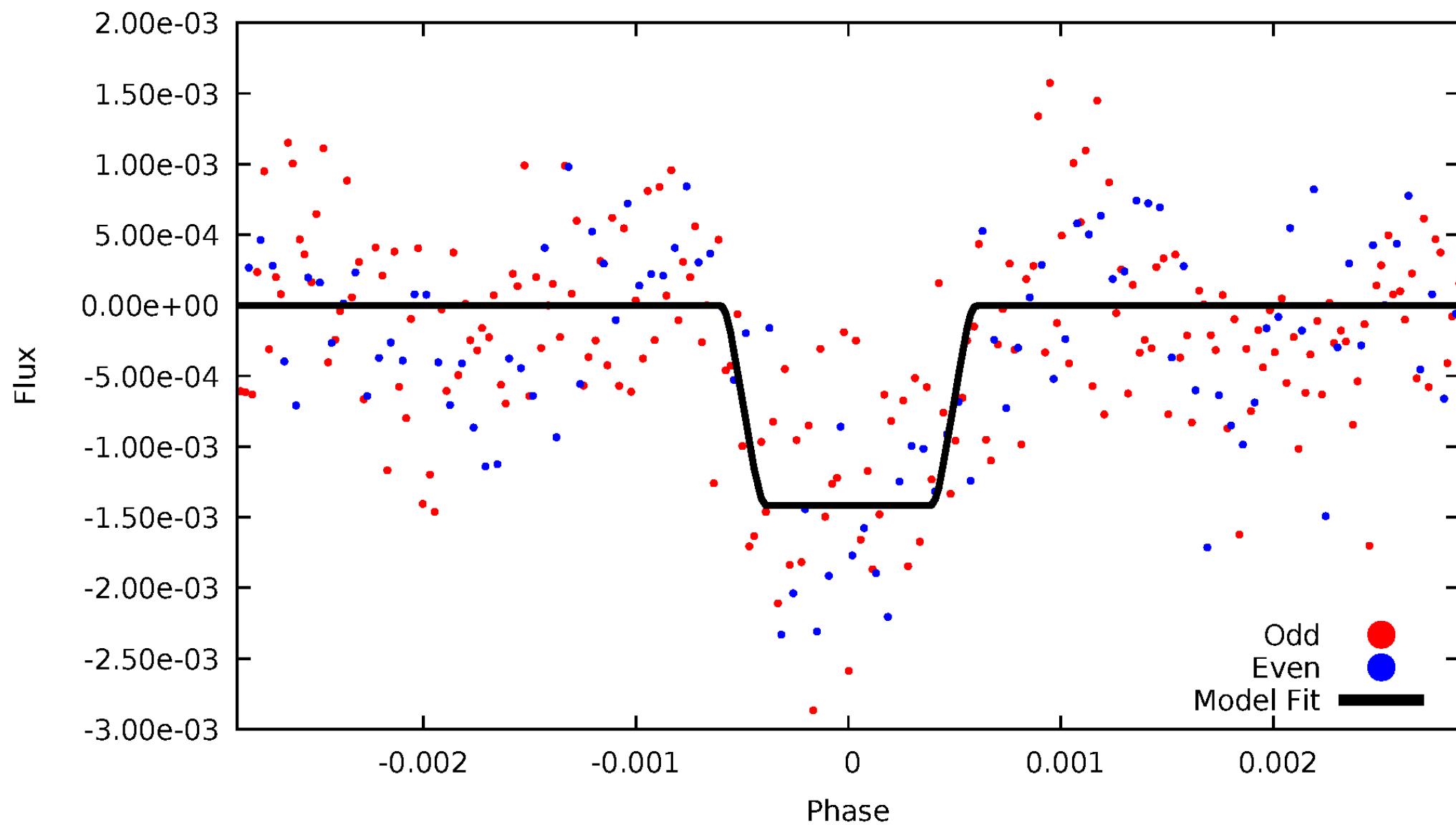
DV Odd/Even

TCE 008307075-01



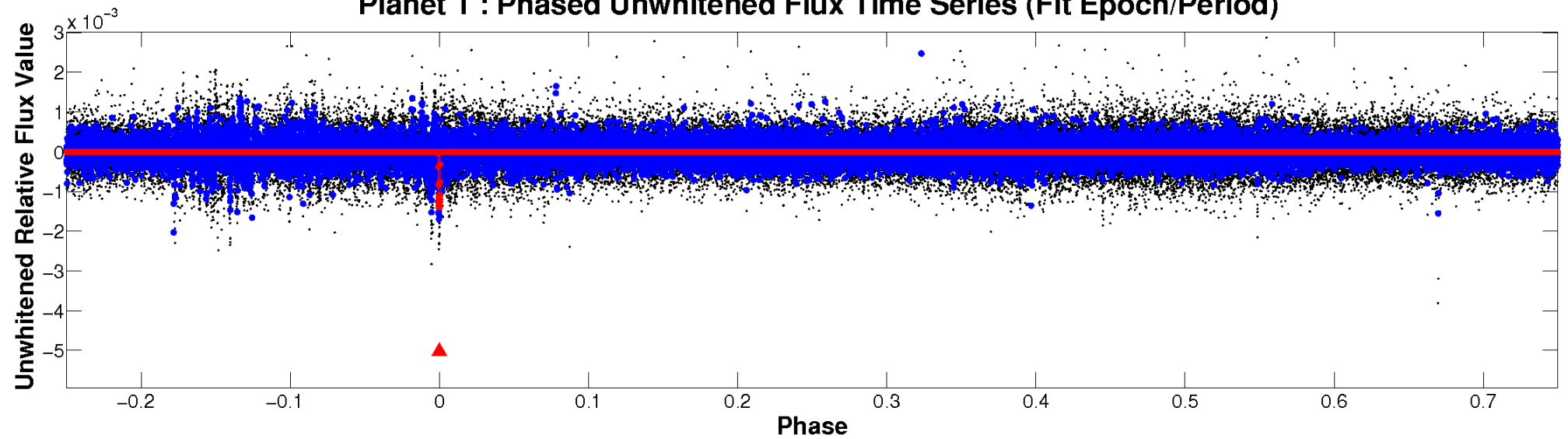
ALT Odd/Even

TCE 008307075-01

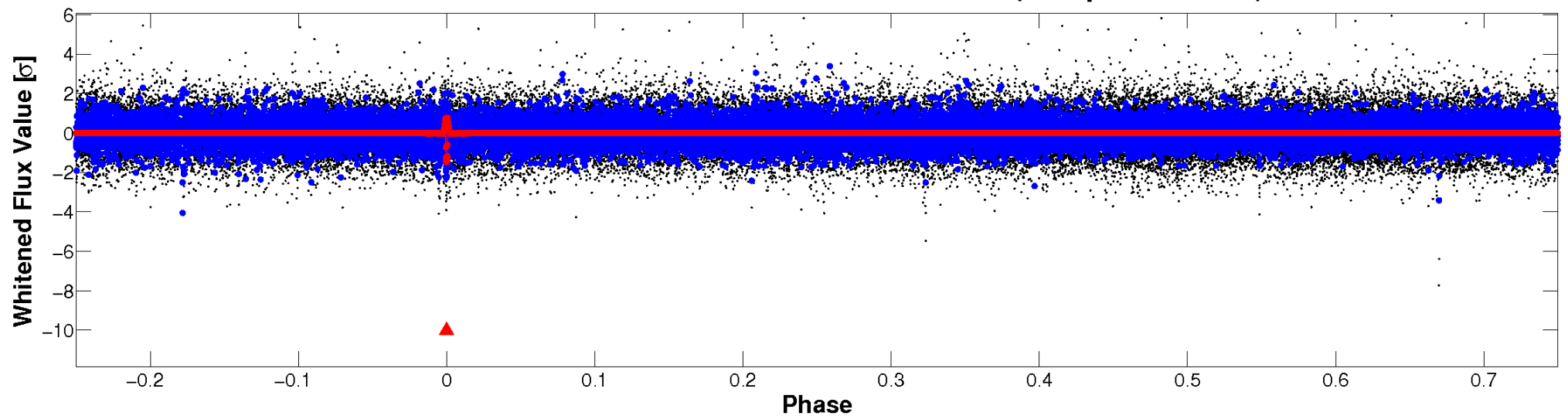


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

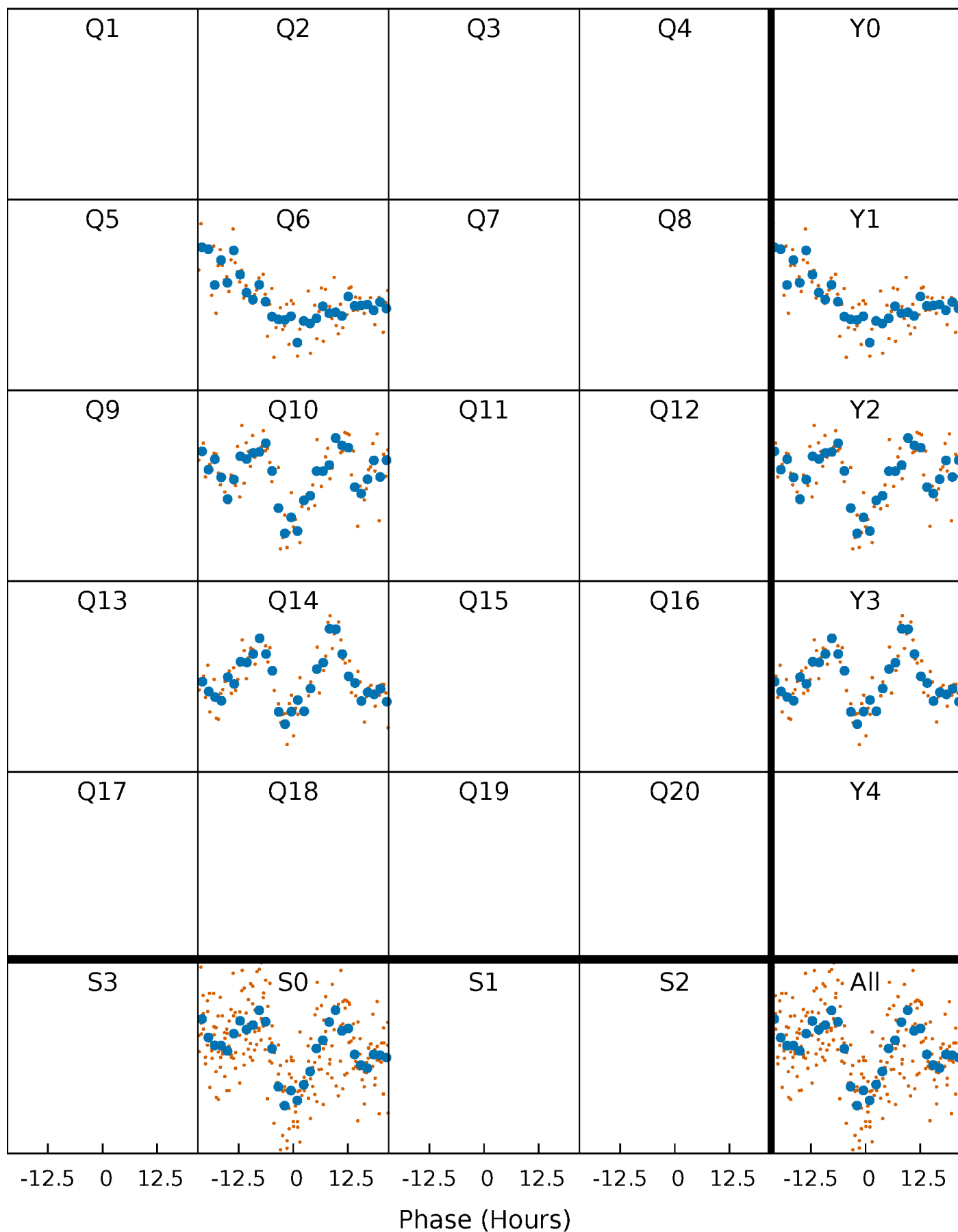


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



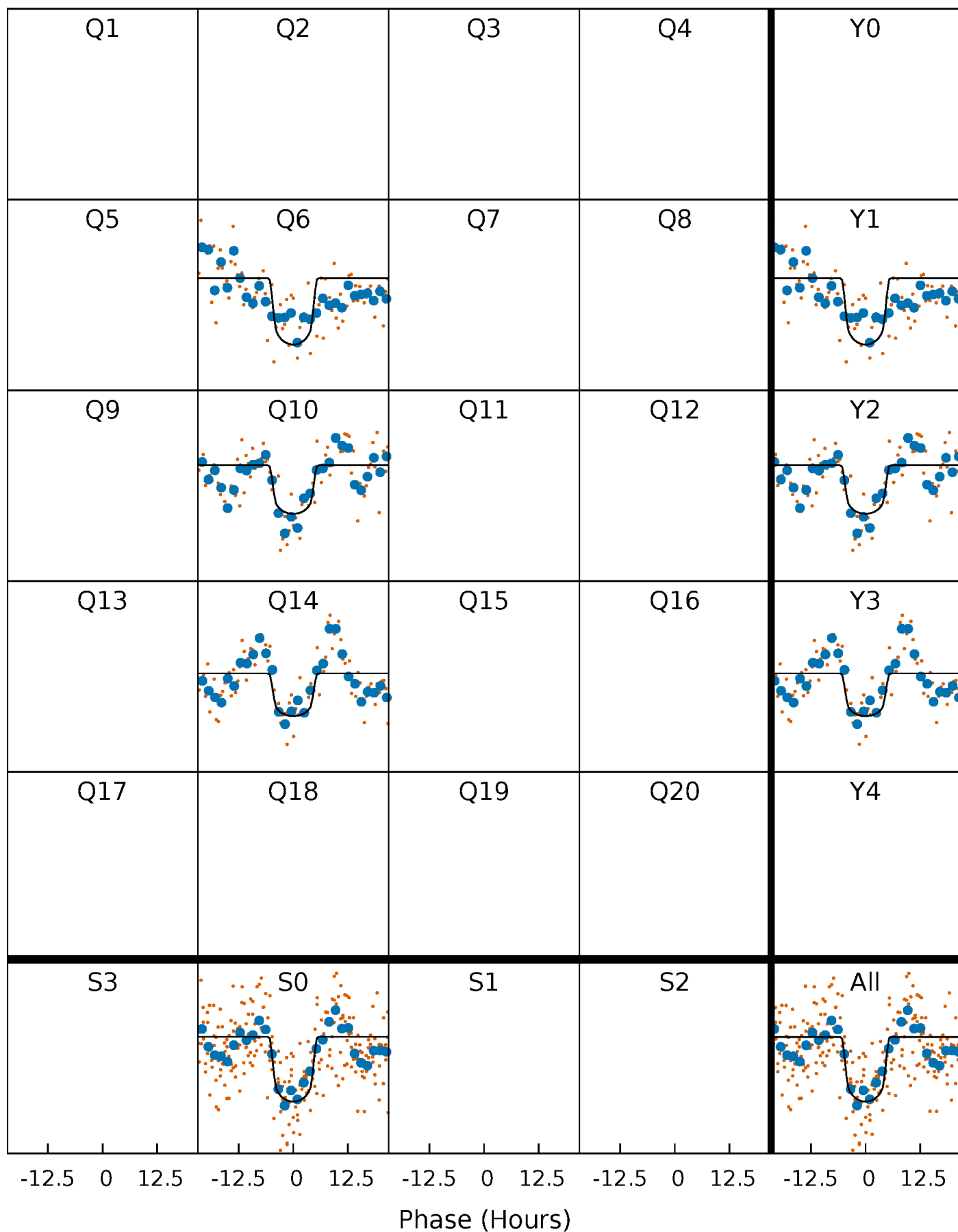
PDC Quarter-Phased Transit Curves

TCE 008307075-01 P=367.088061 Days $T_0=237.974973$ (BKJD)



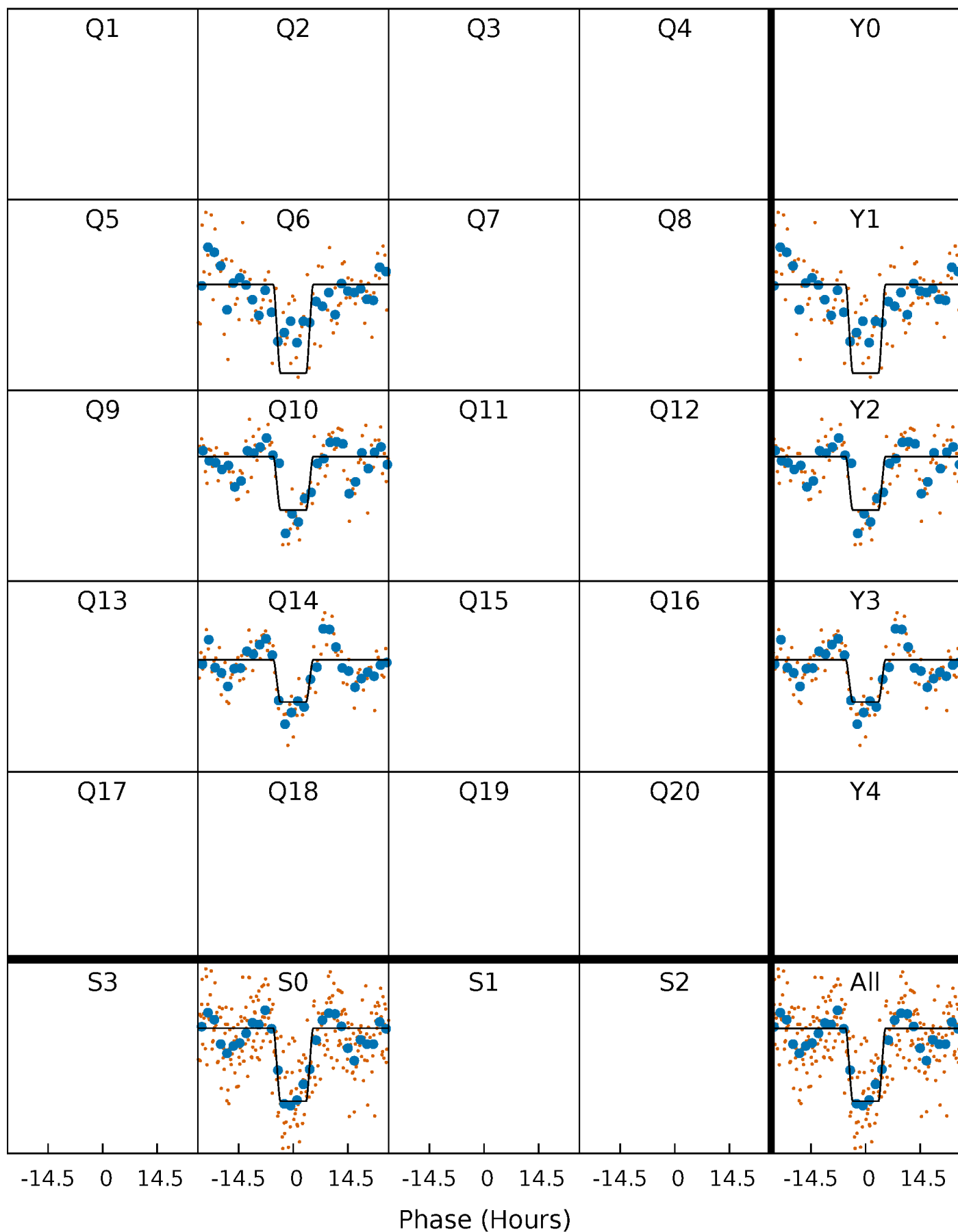
DV Quarter-Phased Transit Curves

TCE 008307075-01 P=367.088061 Days $T_0=237.974973$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

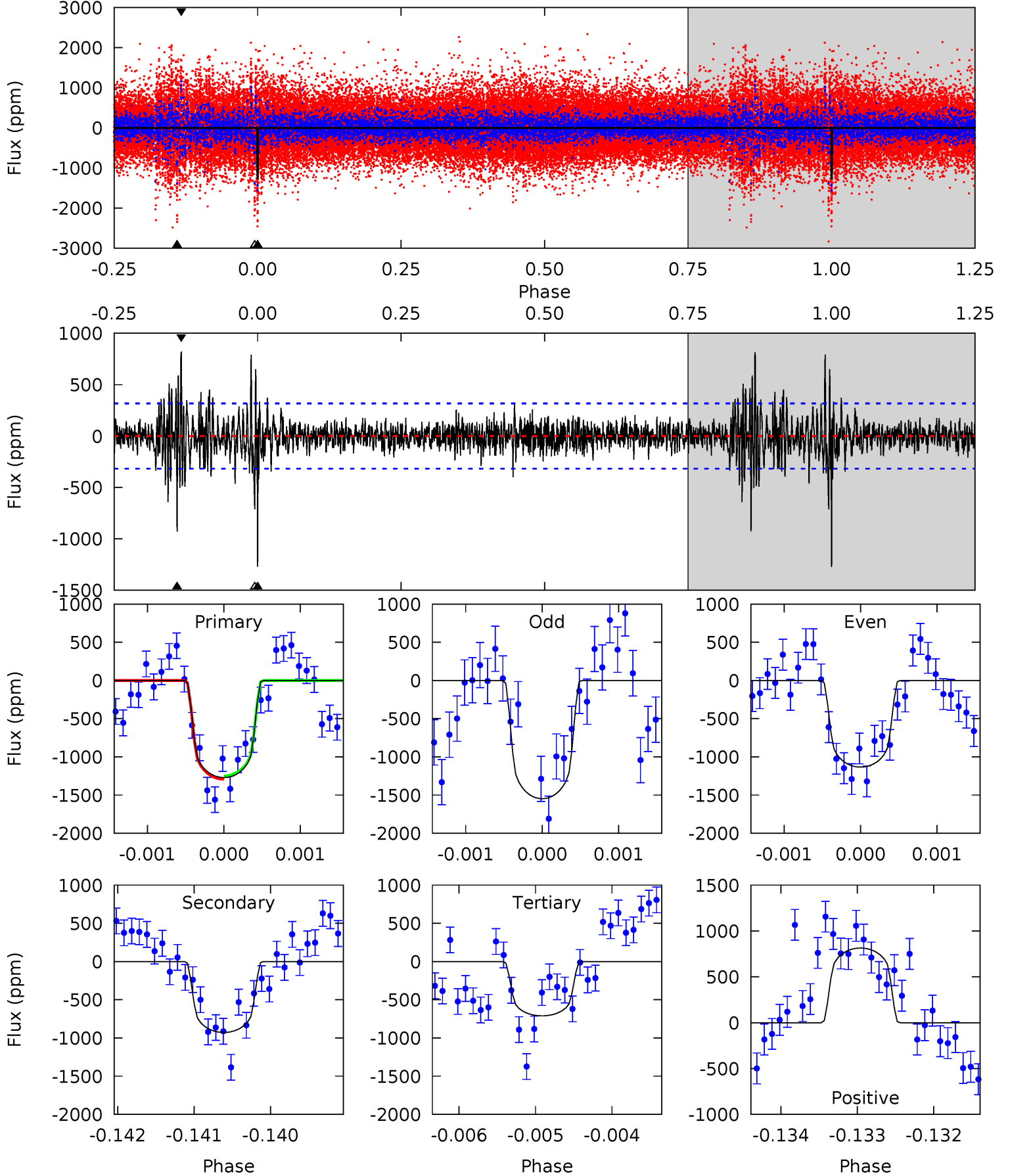
TCE 008307075-01 P=367.095717 Days $T_0=237.954238$ (BKJD)



DV Model-Shift Uniqueness Test

008307075-01, P = 367.088061 Days, E = 237.974973 Days

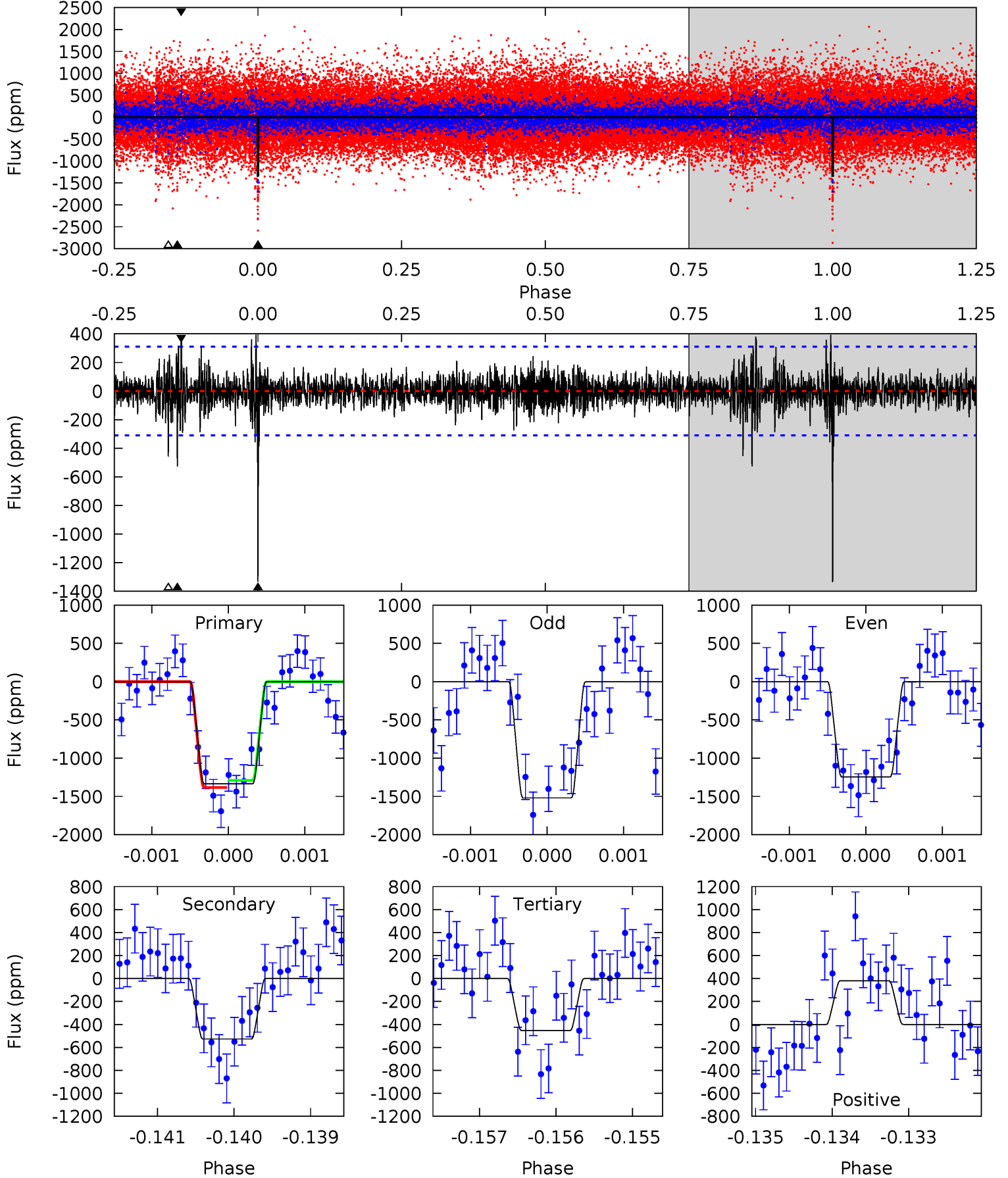
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	15.8	12.1	13.9	5.41	3.22	1.99	9.54	7.78	3.70	1.94	3.30	1.02	0.39	0.36



Alt Model-Shift Uniqueness Test

008307075-01, P = 367.095717 Days, E = 237.954238 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	9.20	7.91	6.64	5.42	3.24	1.30	15.4	16.7	1.29	2.55	2.21	0.89	0.23	0.82



Stellar Parameters For KIC 008307075

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5795^{+175}_{-192}	$4.344^{+0.153}_{-0.187}$	$-0.100^{+0.300}_{-0.300}$	$1.076^{+0.312}_{-0.182}$	$0.933^{+0.137}_{-0.095}$	$1.056^{+0.776}_{-0.513}$
	+3%/-3%	+4%/-4%	+300%/-300%	+29%/-17%	+15%/-10%	+74%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008307075-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-928 ± 59	$4.67^{+0.87}_{-0.71}$	376^{+28}_{-23}	5162^{+318}_{-272}	22739^{+7969}_{-6481}
Alt.	-527 ± 57	$4.48^{+0.81}_{-0.70}$	376^{+28}_{-22}	4669^{+266}_{-240}	13852^{+5812}_{-3841}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

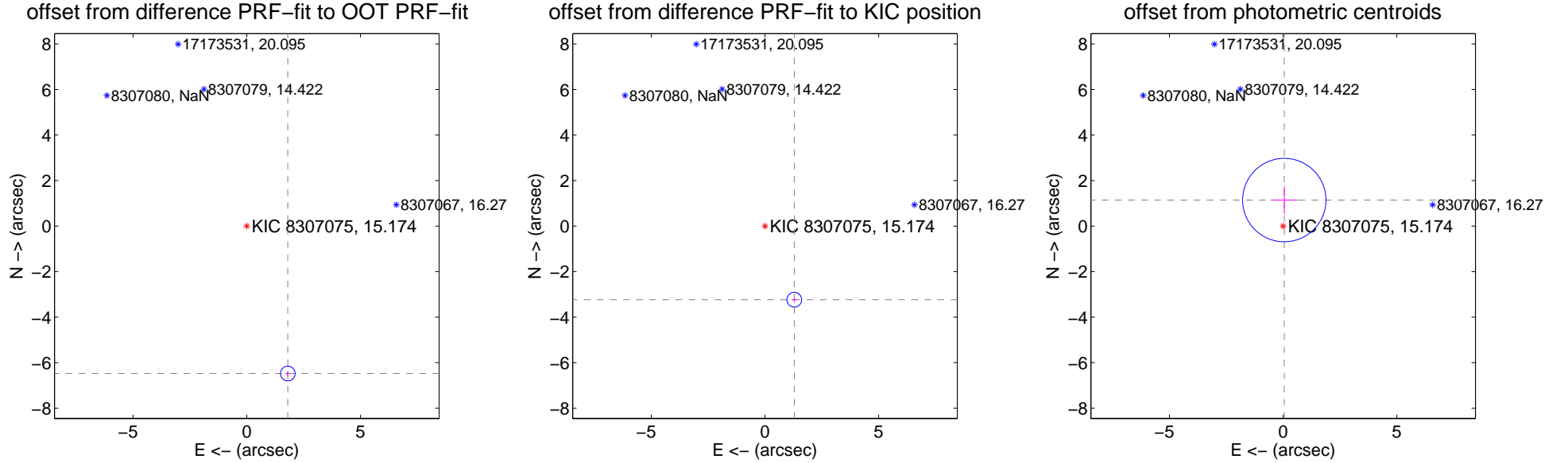
DV Centroid Data

Supplemental centroid analysis for 008307075-01. Kepler magnitude: 15.17. Transit SNR 10.53

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.28 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.724 ± 0.108	62.55	-1.804 ± 0.112	-6.477 ± 0.107
PRF-fit source offset from KIC position	3.482 ± 0.108	32.30	-1.289 ± 0.112	-3.235 ± 0.107
photometric centroid source offset	1.14 ± 0.61	1.87	-0.05 ± 0.59	1.14 ± 0.61

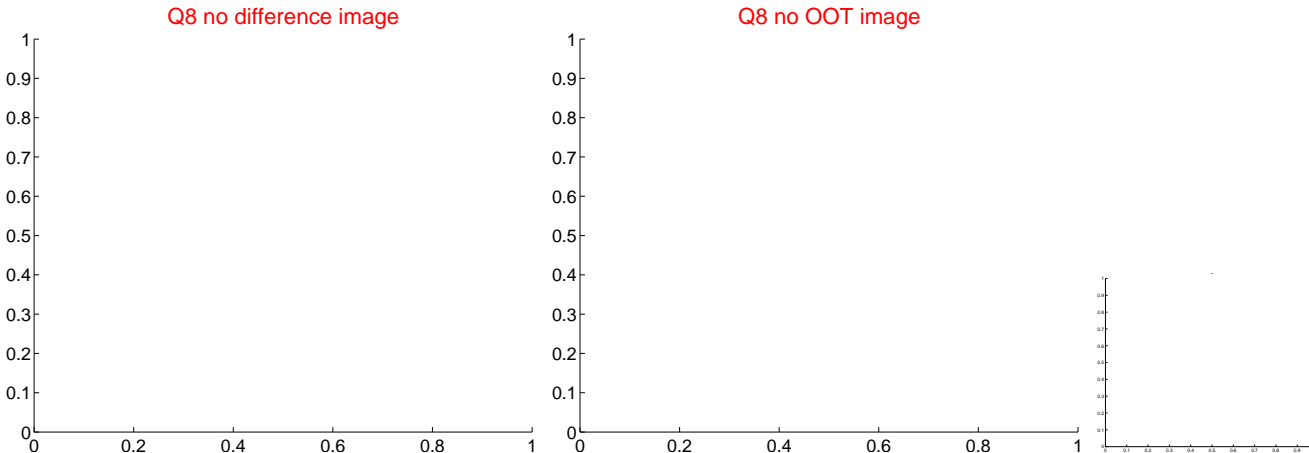
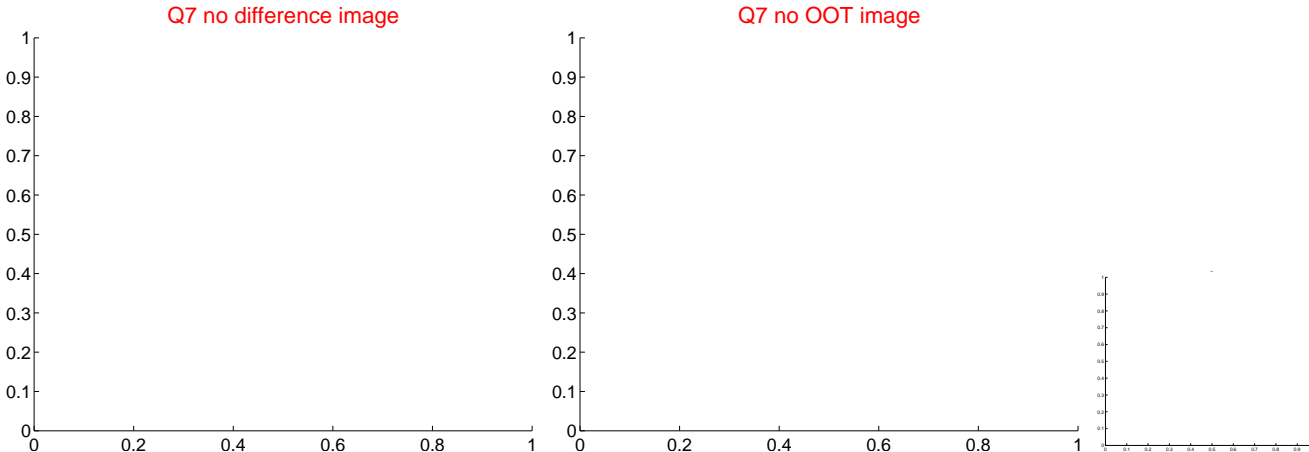
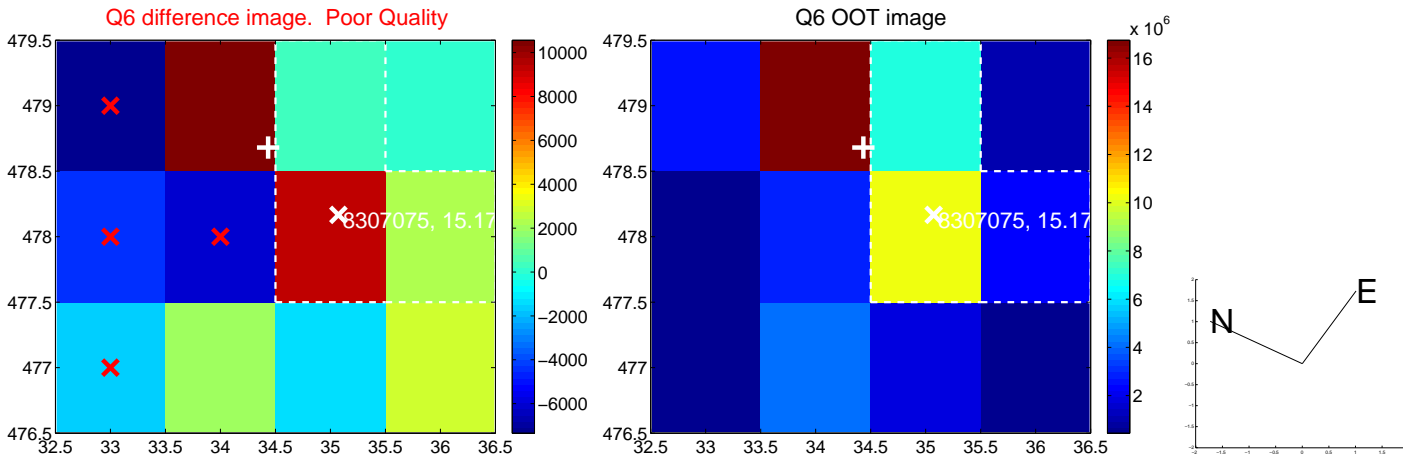
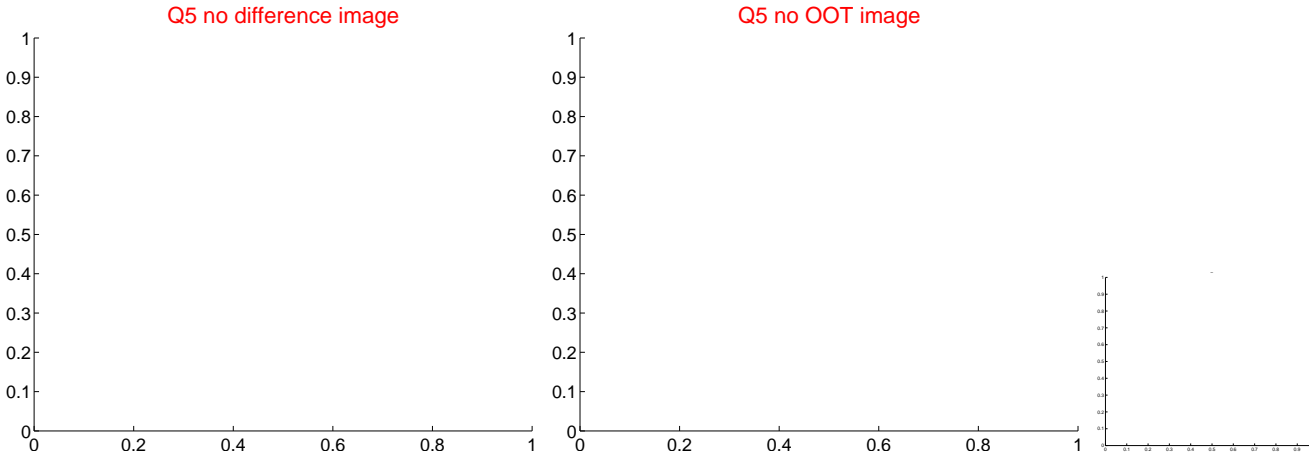


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

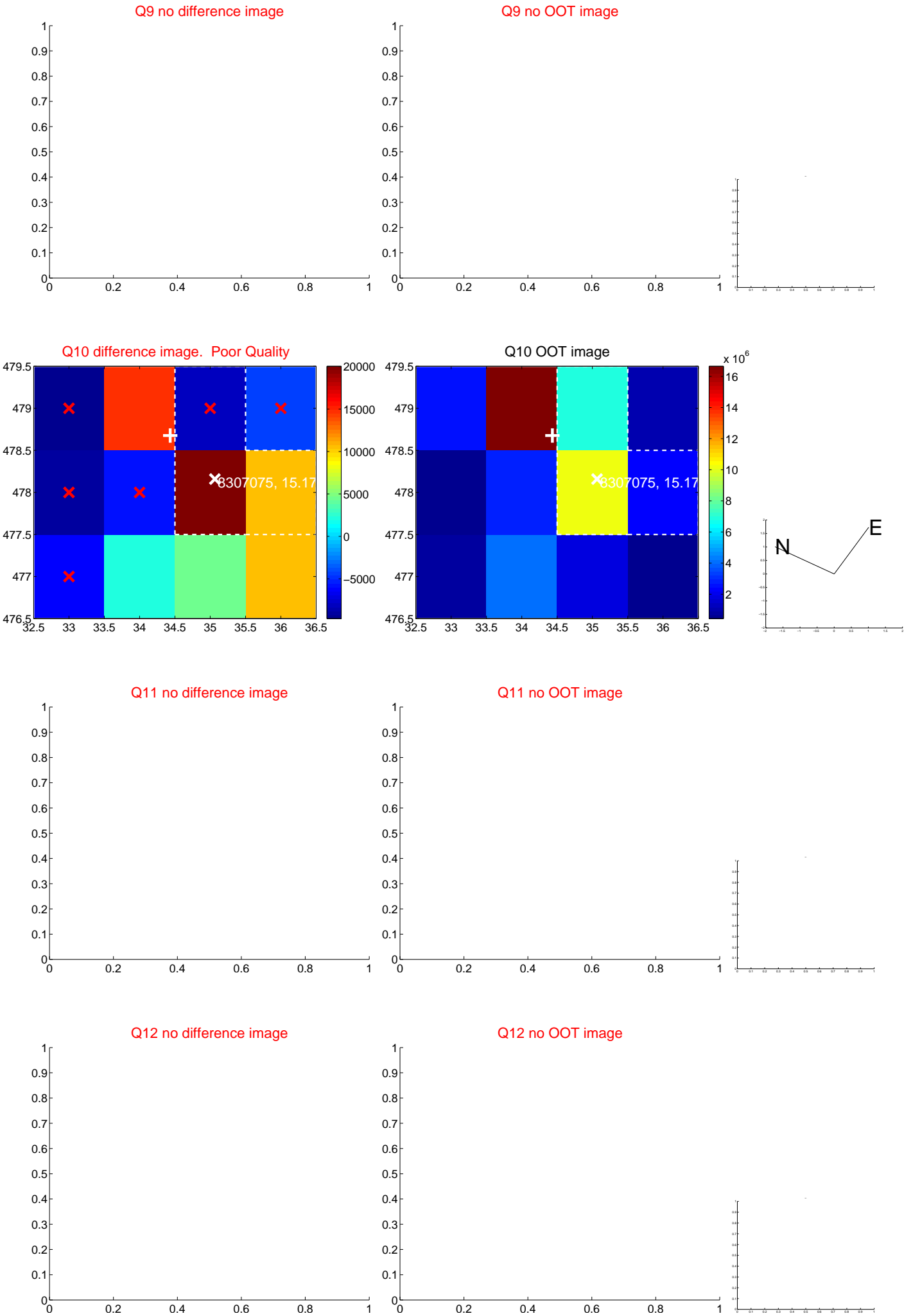
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



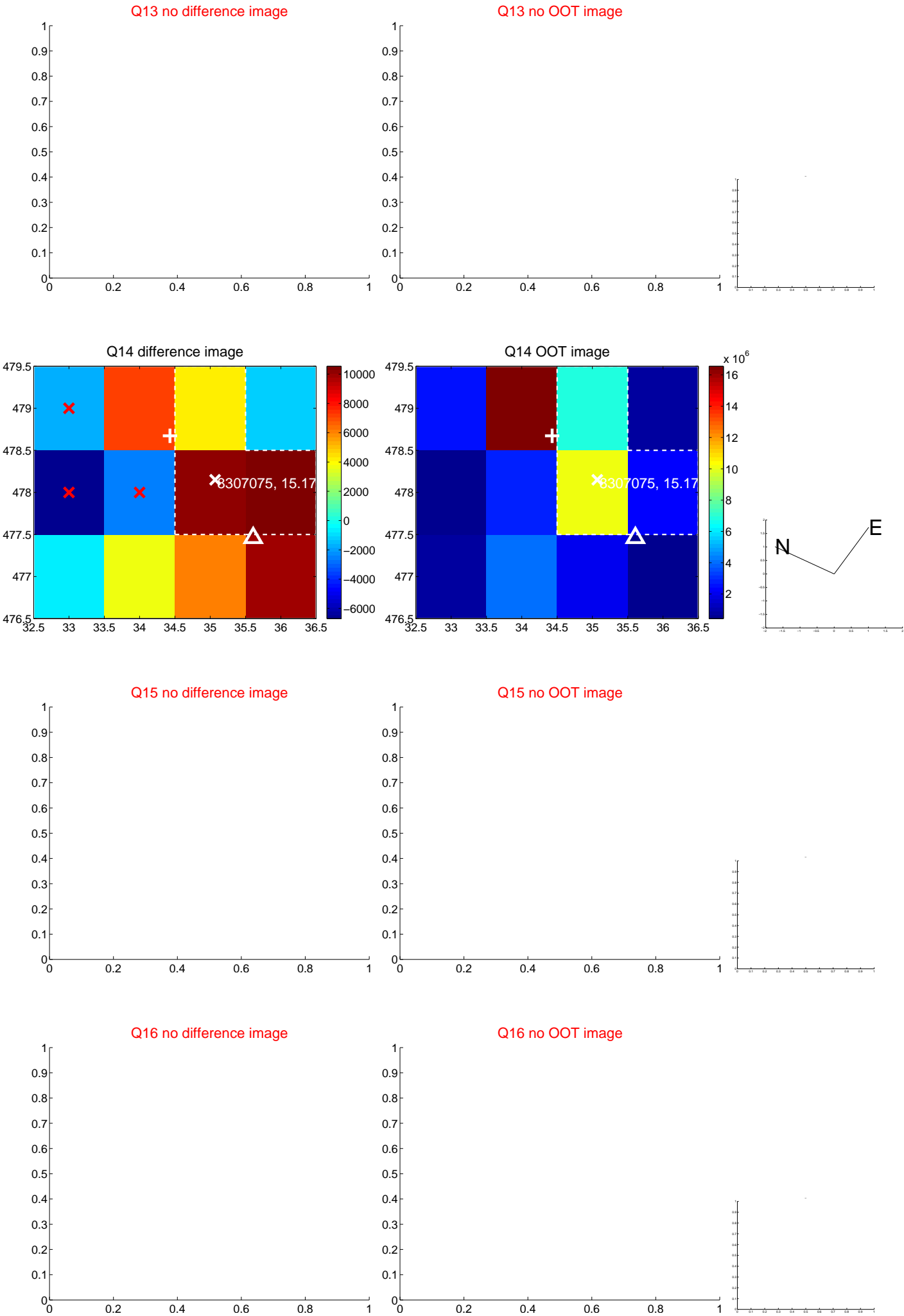
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



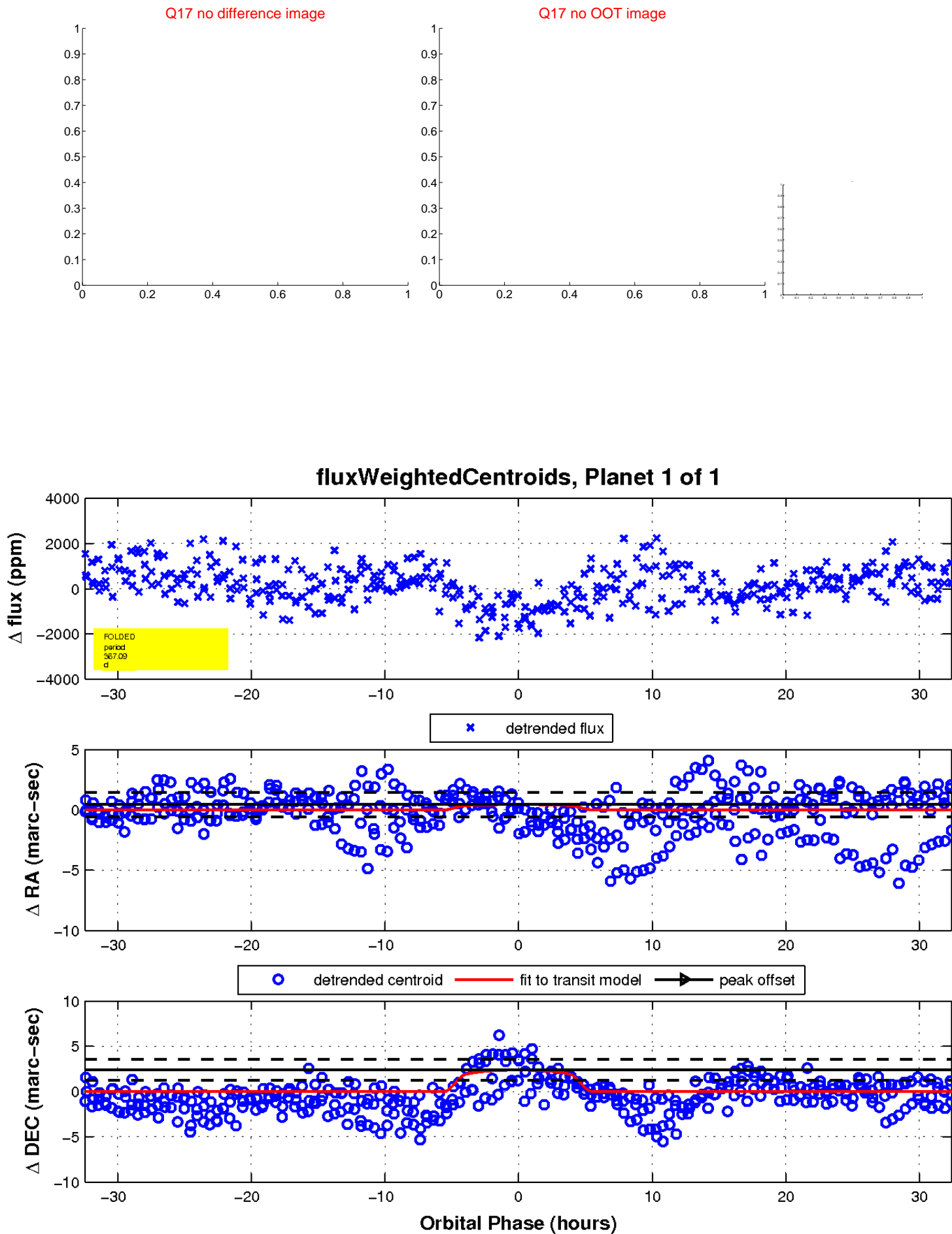
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

